messages. They reinforce doubts about the current system of payments for health promotion in British general practice, which requires doctors to record risk factors but places little emphasis on effective intervention or on targeting. Policy on health promotion should be based not only on the recognition of risk factors but also on evidence that they can be changed and that changing them improves health.

Better health promotion will depend on more research to determine which targeting and intervention strategies work best. To yield clear results, studies will have to be large, not least because the unit of analysis for intervention methods is the doctor or nurse, not the patient. Enough doctors and nurses have to see enough patients if researchers are to distinguish variation among techniques from variation among individuals. This will be expensive but much less costly than pursuing a flawed strategy.

We also need to reconsider the role of targeting intervention at individuals. Other strategies may deserve more attention. These could include group education in schools and workplaces and through the media; and government action such as changing fiscal and agricultural policy, introducing stricter rules on tobacco advertising and food labelling, and tackling the social factors often associated with unhealthy lifestyles. Research techniques that allow us to compare these different approaches need developing.

The most important aspect of this debate, however, is not research but priorities. The key tasks of general practice are helping patients to understand and cope with illness, relieving symptoms, and offering the occasional cure. They have been overshadowed recently by prevention and purchasing—activities that may improve or complement care for those who are or believe themselves to be ill[8] but must never be allowed to displace it. This is important for patients as well as doctors. Failure of policymakers to recognise these priorities is an important cause of the present low state of morale among general practitioners.

A prevention strategy that encourages interventions of proved efficacy among those most likely to benefit will be much more compatible with the core role of general practice than massive indiscriminate collection of data of no proved value. Without this focused approach prevention may lose credibility. The NHS may conclude that Burkitt's taps are stuck open irrevocably and again become preoccupied with developing better mops.

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Patients' demands for prescriptions in primary care

Patients cannot take all the blame for overprescribing

The Audit Commission's recent report on prescribing in general practice in England and Wales estimated that up to £275m could be saved from the NHS drugs bill if overprescribing was reduced.[1] The report lists several overprescribed drugs, including antibiotics and non-steroidal anti-inflammatory drugs. The authors clearly believe that patients' expectations of treatment are partly responsible for the problem, as do many general practitioners.[2] Perhaps the most memorable view came from Marinker, who said, "We may see the doctor as helpless in the face of a population of patients who have an overwhelming need to alter chemically their experiences of the world in which they live."[3] He compared a general practitioner in a consulting room to a barmaid in a gin shop, implying that not only do patients know exactly what they want but that they usually get it. But what evidence is there that patients' demands for prescriptions have any effect on doctors' prescribing habits other than prompting repeat prescribing?

Much of the evidence is equivocal because researchers have not directly defined or measured demand for prescriptions. Instead, studies have focused on doctors' perceptions of patients' demands and doctors' statements that patients' expectations influenced real or hypothetical decisions about prescribing. Little attempt has been made to measure either patients' overt requests for prescriptions in the consultation or their expectations beforehand. About 5-7% of prescriptions, however, are not dispensed,[4] and many drugs are dispensed but not consumed. This suggests that prescribing levels actually exceed patients' expectations. It seems that demand (either real or perceived) is greater than need.

When general practitioners are surveyed they describe high levels of demand,[5] but objective evidence consistently suggests that doctors overestimate patients' expectations.[6] Reanalysis of published data shows that about a fifth of patients leave general practice consultations with prescriptions they did not expect.[7]

In contrast, studies that have considered whether demand from patients influences prescribing habits have yielded inconsistent results. Two studies showed that demand had no influence on prescribing,[8,9] one that perceived demand resulted in lower prescribing,[10] and five that demand was associated with higher rates of prescribing.[7,11-14] None, however, was able to look directly or reliably at the effect of such demand. The two studies that showed demand to have no influence were based on hypothetical consultations and may not accurately have reflected real prescribing behaviour: they were also based in North America and may not apply to general practice in Britain. The studies with negative findings covered a limited range of drugs. Finally, four of the five studies with positive results looked at the whole range of prescribing behaviour and found that severity of disease, type of drug, and whether the patient had an appointment also influenced prescribing. On balance, demand from patients is probably only one of many factors that lead to overprescribing by general practitioners.

Less superficial evidence about the complex reasons for overprescribing will probably come only from qualitative research. Qualitative interview techniques could find out what patients and doctors really think about prescribing. Firstly, detailed and patient-centred investigation should

explore patients' ideas and expectations before consultations, perceptions of symptoms and illnesses, reasons for consulting the doctors, ideas and preferences about treatment, attitudes to drugs, previous experiences with doctors, and what patients expect consultations to achieve. Researchers could ask also whether doctors educate their patients by word or deed to expect prescriptions (or no prescriptions) and whether patients choose doctors whose prescribing habits they like. Careful questioning should disentangle patients' ideal expectations for prescriptions (what they hope for or want) from their actual expectations (what they think will really happen).

Secondly, a similar approach is needed to sort out what general practitioners think and do about prescribing. Perhaps some doctors justify their poor prescribing habits by blaming patients instead of recognising that they sometimes misuse prescribing—for example, to close a difficult consultation. Qualitative studies could investigate doctors' perceptions of patients' preferences for prescriptions, previous experience with and knowledge of individual patients, beliefs about drugs, sense of time and other pressures during consultations, clinical assessments of patients' conditions, expectations of consultations, and other factors influencing the decisions to prescribe. Linking the two kinds of approach on a case by case basis would verify the accuracy of doctors' perceptions.

Finally, we still need to know more about the process of clinical consultations: how and how often patients make their expectations known, how doctors assess patients' expectations, and how well the two parties communicate on this subject. One way of taking this further would be to show a videotape of the consultation separately to each party afterwards and to interview them about what they were thinking at each point (I Cromarty, unpublished findings).

If doctors' perceptions do not correspond with patients' preferences poor or inappropriate prescribing, wastage of drugs, and unsatisfactory doctor-patient relationships may result. Reassuringly, recent research on patients' ideas about drugs suggests that more patient centred practice would not necessarily lead to higher rates of prescribing.[15]

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Evidence based medicine

A new journal to help doctors identify the information they need

See pp 1122, 1126, 1146

Busy doctors have never had time to read all the journals in their disciplines. There are, for example, about 20 clinical journals in adult internal medicine that report studies of direct importance to clinical practice, and in 1992 these journals included over 6000 articles with abstracts: to keep up the dedicated doctor would need to read about 17 articles a day every day of the year.[1] In earlier eras limitations in our understanding of human biology and the absence of powerful clinical research methods meant that major advances were published far less commonly than now. Consequently, clinicians' failure to keep up did not harm patients.

Not any more. Rapid advances in physics, chemistry, and molecular biology since the second world war have led to a huge increase in the possibilities for managing patients. Effective treatments have appeared often for the first time. In parallel with these scientific advances researchers have developed methods of applied research—epitomised by the randomised controlled trial—to identify which new ideas for diagnosis, treatment, and predicting outcome actually work. Many do not and may do more harm than good.

Doctors need to know about the studies that show whether new ideas work, but their volume has grown enormously. What's more, many are published in inaccessible places, are not published at all, or are seriously flawed. Most busy doctors lack the time or skill to track down and evaluate this evidence. Although the skills of searching for evidence and critically appraising it are being mastered by growing numbers of doctors, many cannot keep up. Consequently there is a widening chasm between what we ought to do and what we actually do.

Evidence based medicine [2,3]—which is described at length by William Rosenberg and Anna Donald on p 1122[4]—attempts to fill the chasm by helping doctors find the information that will ensure they can provide optimum management for their patients. In essence, evidence based medicine is rooted in five linked ideas: firstly, clinical decisions should be based on the best available scientific evidence; secondly, the clinical problem—rather than habits or protocols—should determine the type of evidence to be sought; thirdly, identifying the best evidence means using epidemiological and biostatistical ways of thinking; fourthly, conclusions derived from identifying and critically appraising evidence are useful only if put into action in managing patients or making health care decisions; and, finally, performance should be constantly evaluated. The practice of evidence based medicine seems to be able to halt the progressive deterioration in clinical performance that is otherwise routine [5] and which continuing medical education cannot stop.[6]

In 1991 the American College of Physicians began a journal, *ACP Journal Club*, which aimed to provide doctors with the up to date information they need.[7] The editorial team screens far more journals than the average doctor can ever hope to read and identifies research articles of potential clinical relevance. Next, the team scrutinises the research